



Practitioner Diversion Awareness Conference

Drugs of Abuse and Trends

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Course Objectives

- § **Discuss the Public Health Epidemic.**
- § **Review the common drugs of abuse.**
- § **Discuss the relationship between pharmaceutical controlled substances and heroin.**



Course Objectives

- § **Discuss the violence related to controlled substance prescribing and dispensing.**
- § **Review key research and studies involving the impact of indiscriminate prescribing of controlled substances.**



Questions to Discuss

At the completion of this block of instruction you will be able to answer the following questions:

- 1. Which country, per million population, has the largest amount of drug induced deaths ages 15-64?**
- 2. Which state, via prescriptions, dispensed the most oxycodone in the United States in 2016 and 2017?**



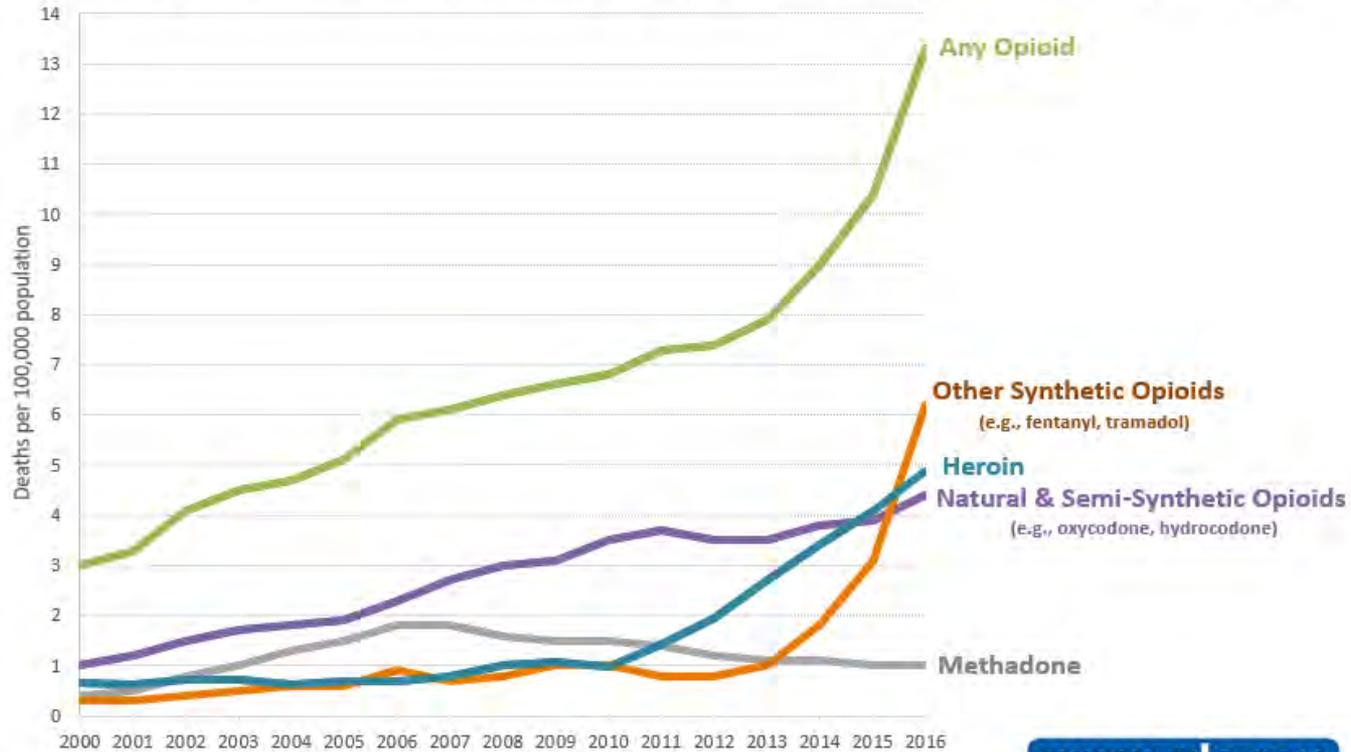
Questions to Discuss

- 3. What percentage of the world's hydrocodone production does the United States consume?**
- 4. What is the most misused prescription controlled substance pain reliever in the United States?**
- 5. What percent of heroin users began their addictions with prescribed pain relievers?**



The Problem – People Are Dying

Overdose Deaths Involving Opioids, by Type of Opioid, United States, 2000-2016

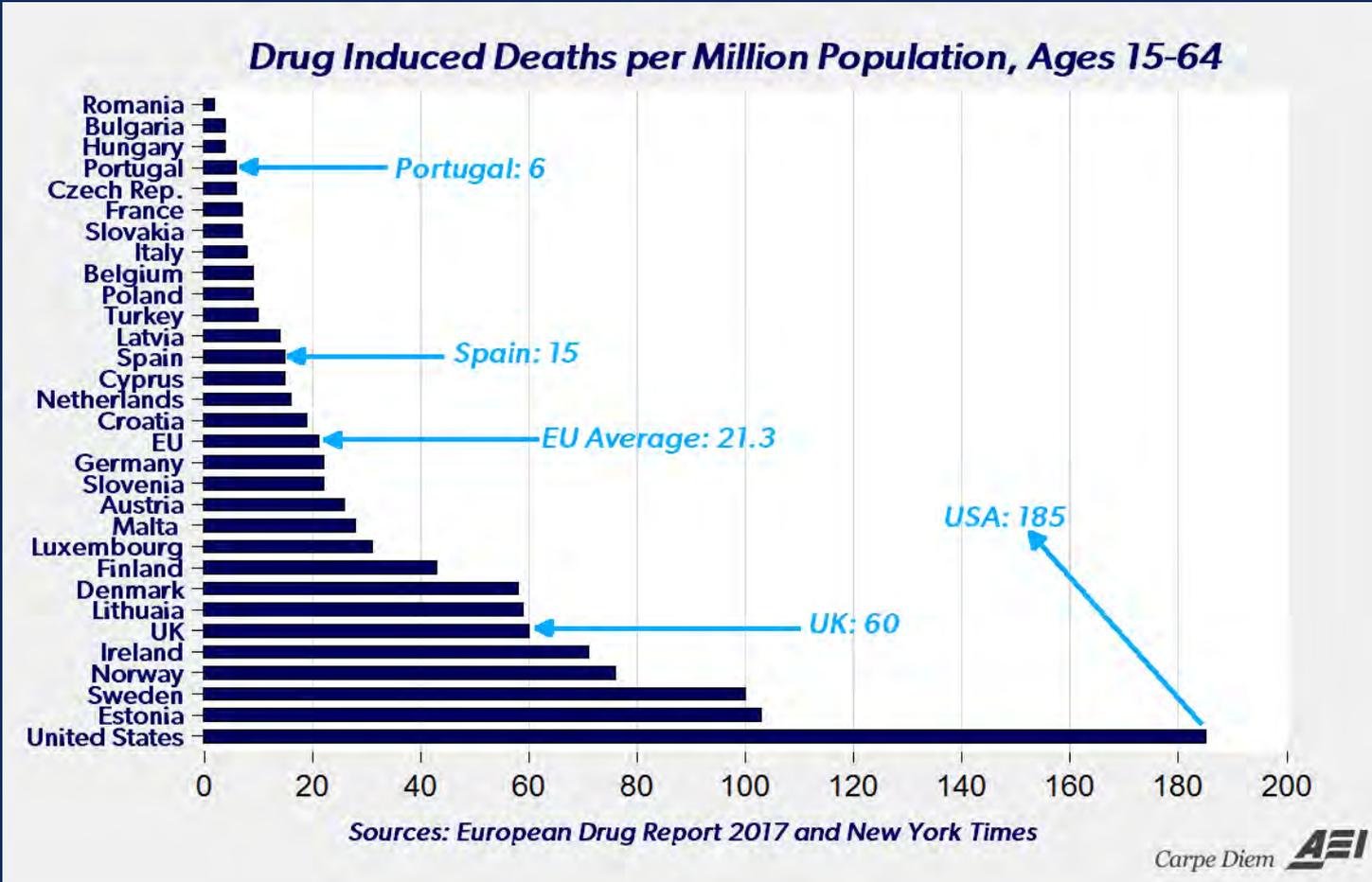


SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2017. <https://wonder.cdc.gov/>.

www.cdc.gov
Your Source for Credible Health Information



The Problem – People Are Dying





Drugs of Abuse

The top 5 distributed scheduled controlled substances in the United States:

- 1. Hydrocodone**
- 2. Oxycodone**
- 3. Codeine**
- 4. Buprenorphine**
- 5. Morphine**



Where Does the United States Rank In Consumption?

Drug Name	United States (Pop. 320 Mil.)		China (Pop. 1.37 Billion)		World (7.3 Bil)
	Percent	Tons	Percentage	Tons	Tons
Hydrocodone			0.00%	0.001	36.3
Oxycodone			1.08%	0.9	83.2
Morphine			3.92%	1.6	40.8
Codeine			2.66%	7.6	285.5
Methadone			4.56%	1.5	32.9
Fentanyl			0.32%	0.006	1.85

Source (2017). INCB data, International Narcotics Board: Comments on Reported Statistics on Narcotic Drugs.



Hydrocodone

§ Hydrocodone / Acetaminophen (toxicity)

§ Similarities:

§ Structurally related to codeine

§ Equal to morphine in producing opiate-like effects

§ Brand Names: Vicodin[®], Lortab[®], Lorcet[®]





Hydrocodone

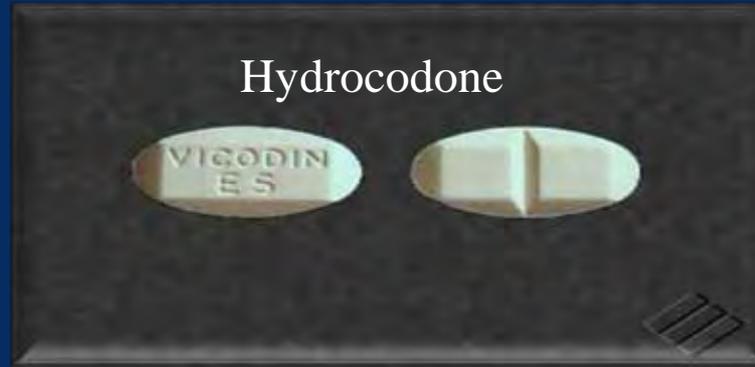


§ **October 6, 2014 moved to SCHEDULE II**

§ **Street prices: \$2 to \$10 per tablet depending on strength & region**



The Trinity Cocktail



Hydrocodone

Opioid



Muscle Relaxant



Alprazolam

Benzodiazepine



Hydrocodone Distribution

2012-2017 U.S. Average



TOTAL DOSAGES



Hydrocodone Distribution

Retail Pharmacies



State Ranking* - Hydrocodone

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	761,524,830	12	KY	167,156,880	23	MS	93,319,730	34	MD	33,623,090	45	WY	10,264,600
2	TX	490,024,170	13	PA	164,632,230	24	OR	90,197,120	35	NJ	33,451,020	46	AK	9,277,300
3	MI	340,090,370	14	MO	160,127,350	25	WI	82,866,264	36	MA	32,595,900	47	NH	9,158,690
4	FL	291,256,130	15	NY	157,669,940	26	NV	73,346,530	37	NE	31,776,250	48	ND	8,138,030
5	IL	263,273,500	16	OK	137,166,930	27	KS	69,862,710	38	NM	31,223,910	49	DE	5,938,440
6	IN	200,457,150	17	LA	126,294,860	28	IA	57,332,210	39	MT	20,872,990	50	VT	5,030,470
7	OH	200,405,880	18	WA	123,108,310	29	CO	56,365,150	40	CT	19,790,230	51	DC	1,400,090
8	TN	200,348,680	19	SC	117,214,080	30	WV	53,773,800	41	ME	17,946,020	52	PR	532,450
9	GA	196,802,830	20	AR	103,551,640	31	MN	50,004,380	42	HI	14,385,450	53	VI	290,920
10	AL	192,898,540	21	VA	101,240,330	32	UT	48,752,040	43	SD	13,094,290	54	GU	141,700
11	NC	168,661,440	22	AZ	95,911,090	33	ID	44,712,660	44	RI	11,447,000	55	AS	0

* *Business Activity – Retail Pharmacies*



State Ranking* - Hydrocodone

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	676,242,530	12	NC	147,357,930	23	MS	80,970,420	34	MD	28,581,330	45	WY	8,763,100
2	TX	446,172,550	13	MO	143,001,770	24	OR	78,111,160	35	NE	28,112,150	46	AK	7,863,730
3	MI	302,709,000	14	PA	135,619,580	25	WI	70,555,870	36	MA	27,569,860	47	NH	7,799,380
4	FL	270,315,920	15	NY	135,009,060	26	NV	66,160,610	37	NJ	27,163,110	48	ND	6,908,450
5	IL	238,409,740	16	OK	126,275,040	27	KS	63,847,710	38	NM	26,501,730	49	DE	4,998,310
6	IN	180,150,420	17	LA	112,484,390	28	IA	50,454,090	39	MT	18,698,410	50	VT	4,045,920
7	GA	178,851,440	18	WA	109,072,900	29	CO	50,350,810	40	CT	16,419,880	51	DC	1,150,600
8	TN	176,844,330	19	SC	103,974,530	30	WV	44,821,360	41	ME	14,686,680	52	PR	280,960
9	AL	169,886,520	20	AR	95,818,050	31	UT	43,698,580	42	HI	12,780,000	53	VI	237,400
10	OH	169,479,340	21	VA	83,110,820	32	MN	42,806,000	43	SD	11,457,270	54	GU	102,800
11	KY	152,420,500	22	AZ	82,588,230	33	ID	40,971,880	44	RI	9,333,410	55	AS	0

* *Business Activity – Retail Pharmacies*



Hydrocodone Distribution Practitioner's Office



State Ranking* - Hydrocodone

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	3,703,028	12	MO	403,080	23	CT	184,360	34	SC	72,080	45	MS	26,580
2	IL	1,674,177	13	AZ	386,846	24	MN	181,996	35	KS	69,640	46	RI	24,000
3	GA	1,396,600	14	NY	369,100	25	NC	172,180	36	ND	65,960	47	SD	15,820
4	FL	800,460	15	TN	343,510	26	OR	147,182	37	WV	57,300	48	DE	10,000
5	VA	683,410	16	HI	331,230	27	IN	146,555	38	NE	56,640	49	VT	9,600
6	AL	568,292	17	CO	309,550	28	KY	140,280	39	AK	53,400	50	NH	6,200
7	MD	545,964	18	WA	305,385	29	IA	123,365	40	AR	42,150	51	DC	4,800
8	MI	509,320	19	NJ	255,760	30	LA	109,842	41	WY	37,200	52	GU	3,400
9	TX	489,150	20	OH	229,340	31	ID	103,810	42	MT	33,400	53	VI	200
10	OK	461,270	21	WI	208,431	32	MA	100,520	43	NM	33,318	54	AS	0
11	PA	446,850	22	NV	188,870	33	UT	75,680	44	ME	28,130	55	PR	0

* *Business Activity – Retail Practitioners*



State Ranking* - Hydrocodone

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	2,723,452	12	MO	354,760	23	NC	172,210	34	NE	70,050	45	RI	23,700
2	IL	1,063,795	13	AZ	346,895	24	MN	169,730	35	SC	65,660	46	MS	21,106
3	GA	992,335	14	PA	328,200	25	OR	166,920	36	KS	58,450	47	SD	14,300
4	FL	876,750	15	WA	308,970	26	KY	158,630	37	ND	55,390	48	DE	13,100
5	VA	503,700	16	CO	305,620	27	IN	156,430	38	WY	53,508	49	VT	9,800
6	TX	466,140	17	TN	294,490	28	CT	135,455	39	WV	47,100	50	DC	4,000
7	MD	446,822	18	OK	268,960	29	MA	123,790	40	AR	43,350	51	GU	4,000
8	MI	403,666	19	NJ	256,028	30	IA	119,135	41	MT	42,790	52	NH	4,000
9	NY	366,975	20	OH	219,570	31	LA	114,280	42	AK	40,480	53	VI	1,400
10	HI	363,900	21	NV	204,108	32	ID	92,240	43	ME	28,500	54	AS	0
11	AL	356,450	22	WI	181,930	33	UT	81,400	44	NM	26,990	55	PR	0

* *Business Activity – Retail Practitioners*



OxyContin®

The
1990s



OxyContin® Tablets
(oxycodone hydrochloride controlled-release)



OxyContin®

- § **OxyContin® controlled release formulation of Schedule II oxycodone:**
 - § **The controlled release method of delivery allowed for a longer duration of drug action and contained much larger doses of oxycodone.**
 - § **Abusers easily compromised the controlled release formulation by crushing the tablets for a powerful morphine-like high.**
 - § **10, 20, 40, 80mg available.**



OxyContin®

§ Effects:

§ **Similar to morphine in effects and potential for abuse/dependence.**

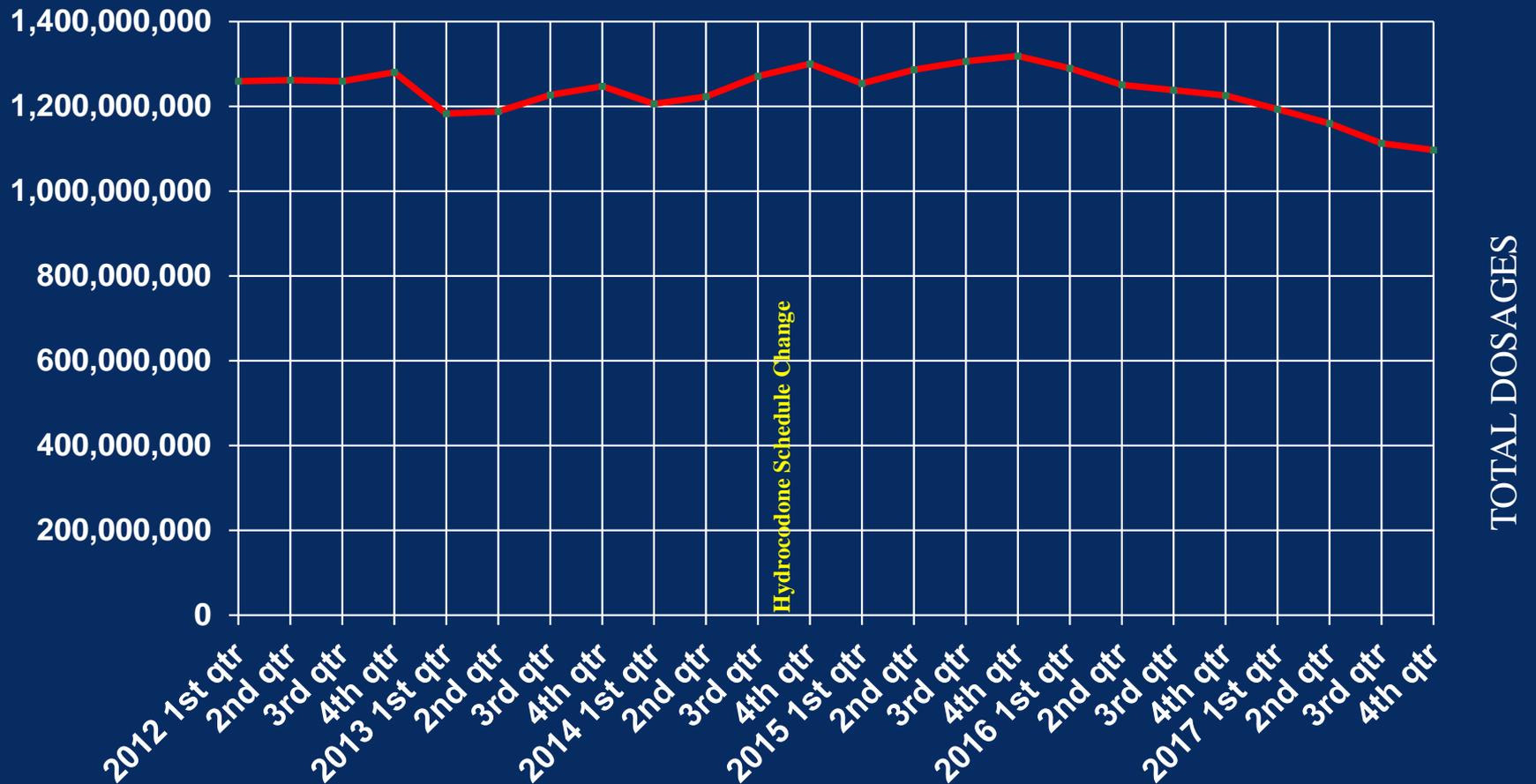
§ **Sold in “Cocktails” such as:**

§ **Oxycodone, Soma® and Xanax®**

§ **Street price: Approx. \$80 per 80mg tablet**



Oxycodone Distribution 2012-2017 U.S. Average





Oxycodone Distribution

Retail Pharmacies



State Ranking* - Oxycodone

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	FL	327,396,960	12	MD	125,735,760	23	KY	82,392,630	34	MS	37,881,860	45	MT	14,987,850
2	PA	289,615,310	13	VA	125,223,670	24	AL	81,599,660	35	NM	37,587,670	46	PR	12,343,940
3	CA	283,323,420	14	MO	110,174,930	25	MN	72,078,260	36	WV	34,522,500	47	AK	11,106,040
4	NY	274,724,480	15	MA	109,525,870	26	OK	70,780,960	37	ME	24,677,180	48	WY	9,734,720
5	OH	240,022,630	16	MI	97,933,810	27	LA	67,844,460	38	NH	24,281,880	49	VT	8,974,030
6	NC	236,168,260	17	WI	94,207,800	28	CT	62,070,650	39	IA	24,180,470	50	SD	7,231,450
7	NJ	174,379,890	18	IN	91,166,180	29	NV	60,054,648	40	DE	24,126,160	51	DC	6,682,270
8	AZ	168,119,440	19	OR	90,591,450	30	UT	59,277,520	41	ID	21,551,870	52	ND	6,175,330
9	TN	166,650,300	20	SC	90,410,270	31	IL	53,048,100	42	NE	17,785,620	53	GU	442,000
10	GA	150,552,720	21	CO	85,984,060	32	AR	47,225,630	43	RI	16,602,080	54	VI	328,320
11	WA	135,572,910	22	TX	84,794,340	33	KS	44,555,870	44	HI	15,466,860	55	AS	0

* *Business Activity – Retail Pharmacies*



State Ranking* - Oxycodone

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	FL	329,461,680	12	MD	114,361,790	23	CO	78,169,210	34	MS	36,635,450	45	MT	13,427,080
2	CA	261,549,628	13	VA	107,748,430	24	AL	77,140,750	35	NM	32,068,120	46	AK	10,185,200
3	PA	253,252,920	14	MO	101,345,360	25	OK	69,022,730	36	WV	28,936,880	47	WY	8,963,820
4	NY	241,791,409	15	MA	94,783,430	26	MN	64,133,340	37	IA	22,162,430	48	PR	7,957,520
5	NC	213,722,718	16	MI	90,536,160	27	LA	63,814,980	38	DE	21,864,430	49	VT	7,852,910
6	OH	212,322,630	17	TX	87,319,170	28	NV	56,910,004	39	ID	21,243,380	50	SD	6,312,160
7	TN	157,546,900	18	IN	83,911,860	29	UT	55,264,620	40	NH	21,171,060	51	DC	5,914,480
8	NJ	150,664,960	19	SC	83,287,870	30	CT	53,910,840	41	ME	19,988,670	52	ND	5,434,750
9	AZ	150,356,340	20	OR	80,083,810	31	IL	50,154,100	42	NE	16,531,480	53	GU	358,700
10	GA	148,367,190	21	KY	78,914,340	32	AR	44,957,930	43	HI	14,251,920	54	VI	256,400
11	WA	124,475,080	22	WI	78,771,970	33	KS	42,893,960	44	RI	13,956,870	55	AS	0

* *Business Activity – Retail Pharmacies*



Oxycodone Distribution Practitioner's Office



State Ranking* - Oxycodone

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	GA	402,510	12	PA	89,455	23	MO	43,760	34	NM	14,100	45	DC	1,800
2	MD	356,390	13	TN	80,350	24	MI	39,190	35	NE	14,000	46	RI	1,200
3	CT	230,051	14	OK	78,610	25	KS	36,180	36	MA	11,535	47	WY	1,080
4	AL	171,025	15	VA	78,320	26	IA	35,400	37	LA	9,750	48	MT	800
5	HI	165,900	16	AZ	74,000	27	OR	33,880	38	MS	7,320	49	VT	800
6	CO	165,760	17	MN	71,360	28	TX	21,460	39	KY	7,300	50	DE	520
7	CA	152,772	18	IL	70,145	29	SD	17,860	40	AR	6,400	51	WV	200
8	WI	151,030	19	SC	58,440	30	WA	17,800	41	UT	5,700	52	AS	0
9	NV	147,440	20	NC	53,160	31	IN	16,500	42	ME	4,000	53	GU	0
10	FL	141,586	21	NJ	45,460	32	AK	16,270	43	NH	3,300	54	PR	0
11	NY	135,680	22	OH	44,600	33	ID	14,830	44	ND	2,910	55	VI	0

* *Business Activity – Retail Practitioners*



State Ranking* - Oxycodone

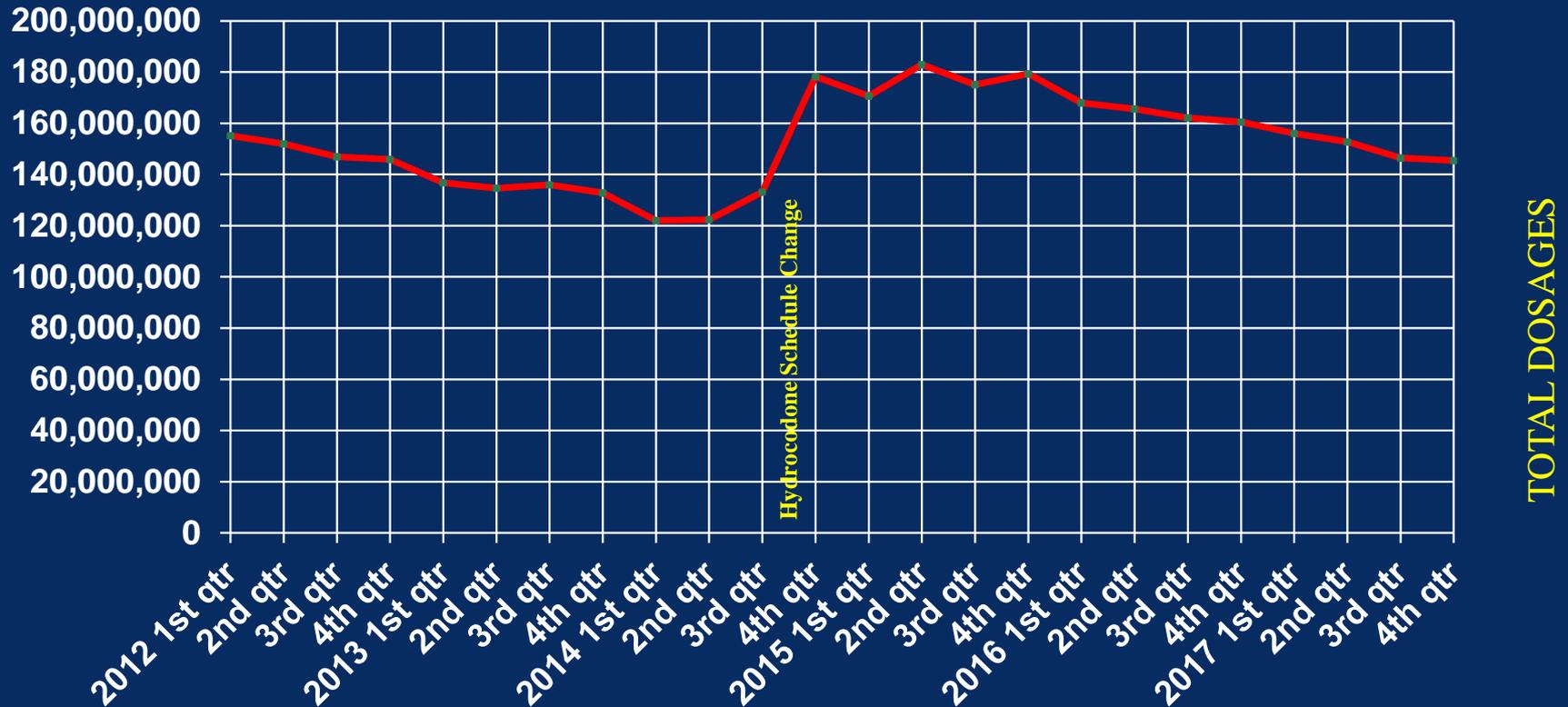
January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	MD	344,330	12	TN	79,985	23	SC	25,882	34	ND	7,260	45	KY	2,000
2	GA	319,335	13	VA	61,150	24	OH	22,879	35	MA	7,120	46	MT	1,300
3	HI	208,250	14	AZ	59,160	25	ID	22,765	36	AR	6,500	47	RI	900
4	NV	185,725	15	MN	53,860	26	NC	19,377	37	UT	6,035	48	VT	400
5	CT	170,864	16	PA	48,811	27	NE	18,820	38	MS	5,440	49	DE	300
6	CO	156,965	17	IL	47,750	28	MO	18,315	39	LA	4,900	50	NH	200
7	CA	152,927	18	MI	43,710	29	WA	17,730	40	NM	4,700	51	WV	200
8	AL	120,325	19	OK	39,282	30	KS	17,485	41	ME	2,800	52	AS	0
9	WI	118,930	20	NJ	37,530	31	TX	16,952	42	SD	2,700	53	GU	0
10	FL	112,307	21	IA	31,420	32	IN	8,740	43	WY	2,040	54	PR	0
11	NY	94,790	22	OR	31,190	33	AK	8,490	44	DC	2,000	55	VI	0

* *Business Activity – Retail Practitioners*



Codeine Distribution 2012-2017 U.S. Average





Codeine Distribution

Retail Pharmacies



State Ranking* - Codeine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	TX	145,413,320	12	SC	11,648,710	23	KY	7,847,140	34	CO	3,629,700	45	MT	1,429,950
2	CA	75,550,040	13	OK	11,302,780	24	NC	7,726,310	35	IA	3,368,310	46	NH	1,360,470
3	MI	36,087,230	14	MO	10,959,250	25	AL	7,300,710	36	NM	2,667,270	47	RI	1,266,300
4	IL	26,863,020	15	AZ	10,685,640	26	MN	6,714,870	37	UT	2,358,370	48	SD	1,156,440
5	FL	25,045,710	16	AR	10,151,350	27	LA	6,295,160	38	PR	2,132,610	49	ND	807,910
6	NY	24,208,400	17	MD	9,867,790	28	OR	5,424,730	39	NE	2,043,030	50	AK	790,600
7	PA	22,796,838	18	WA	9,355,780	29	KS	4,356,640	40	ID	2,020,160	51	WY	642,850
8	OH	16,846,030	19	VA	9,124,810	30	WV	4,332,620	41	DC	1,921,640	52	VT	593,170
9	TN	15,622,570	20	WI	8,631,680	31	CT	4,206,600	42	ME	1,916,500	53	GU	178,450
10	GA	15,209,500	21	IN	8,522,327	32	MS	4,039,460	43	HI	1,858,350	54	VI	108,750
11	NJ	13,344,450	22	MA	7,955,420	33	NV	4,015,790	44	DE	1,699,330	55	AS	0

* *Business Activity – Retail Pharmacies*



State Ranking* - Codeine

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	TX	140,549,520	12	NJ	11,695,290	23	AL	6,994,970	34	CO	3,341,860	45	MT	1,286,740
2	CA	66,917,310	13	OK	11,200,330	24	KY	6,977,190	35	IA	3,132,620	46	NH	1,160,800
3	MI	33,561,880	14	MO	10,102,450	25	MA	6,886,800	36	NM	2,445,390	47	RI	1,092,250
4	IL	24,941,980	15	AZ	10,010,270	26	LA	5,968,350	37	UT	2,163,250	48	SD	1,037,230
5	FL	24,490,360	16	AR	9,526,020	27	MN	5,883,620	38	PR	2,071,250	49	ND	741,930
6	NY	20,408,340	17	MD	8,604,850	28	OR	4,904,040	39	ID	1,801,120	50	AK	734,350
7	PA	19,629,293	18	WA	8,603,170	29	WV	4,207,020	40	NE	1,766,620	51	WY	568,000
8	GA	15,047,710	19	VA	8,019,790	30	KS	4,044,640	41	HI	1,710,400	52	VT	520,250
9	OH	14,752,550	20	WI	7,402,680	31	MS	3,902,790	42	DC	1,687,620	53	GU	157,600
10	TN	12,652,630	21	IN	7,342,940	32	CT	3,637,210	43	ME	1,573,450	54	VI	119,000
11	SC	11,967,085	22	NC	7,209,860	33	NV	3,626,610	44	DE	1,426,260	55	AS	0

* *Business Activity – Retail Pharmacies*



Codeine Distribution Practitioner's Office



State Ranking* - Codeine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	1,723,088	12	AL	115,012	23	IN	23,790	34	SC	10,030	45	WV	2,800
2	MD	357,835	13	OR	99,050	24	KS	23,640	35	IA	10,000	46	NH	2,150
3	VA	258,110	14	MI	92,986	25	NV	23,440	36	CT	8,615	47	DC	2,100
4	PA	204,270	15	OK	84,247	26	WI	22,995	37	ME	7,900	48	GU	1,900
5	WA	195,300	16	MO	62,110	27	AR	22,610	38	ND	7,060	49	MS	1,500
6	NJ	192,140	17	TN	59,610	28	KY	18,280	39	UT	6,600	50	NM	800
7	AZ	168,950	18	FL	52,360	29	LA	18,150	40	MT	4,900	51	VT	350
8	IL	157,865	19	CO	39,370	30	OH	16,840	41	SD	4,200	52	VI	300
9	GA	146,060	20	ID	35,310	31	MN	16,120	42	WY	4,170	53	RI	100
10	NY	141,280	21	MA	29,320	32	NC	13,128	43	DE	3,760	54	AS	0
11	TX	131,720	22	NE	25,250	33	HI	12,490	44	AK	2,915	55	PR	0

* *Business Activity – Retail Practitioners*



State Ranking* - Codeine

January – December 2017

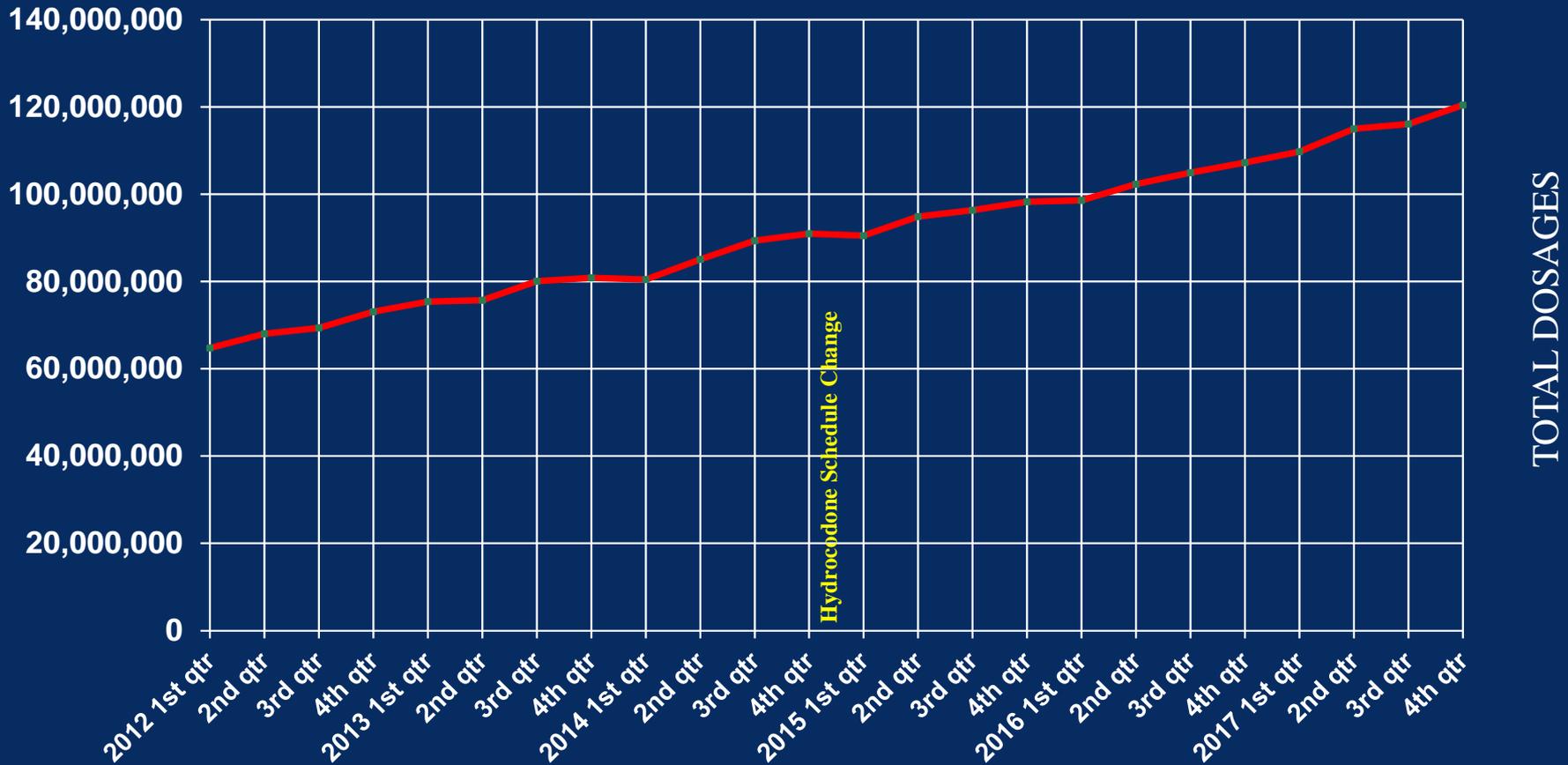
RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	1,322,930	12	NJ	111,515	23	KS	32,820	34	SC	8,680	45	SD	3,200
2	MD	326,320	13	TN	95,300	24	MA	29,900	35	CT	8,510	46	AK	2,940
3	WA	263,930	14	MI	89,320	25	WI	21,465	36	MT	6,960	47	DC	2,000
4	VA	207,510	15	MO	74,690	26	AR	21,070	37	WY	6,790	48	NM	1,630
5	NY	170,490	16	AL	73,280	27	KY	18,700	38	UT	6,000	49	GU	700
6	PA	162,865	17	ID	65,270	28	HI	16,528	39	ND	5,795	50	NH	510
7	AZ	155,590	18	OK	61,350	29	IN	15,525	40	NC	5,695	51	VT	350
8	IL	148,825	19	FL	51,710	30	LA	14,380	41	ME	5,400	52	VI	200
9	GA	147,960	20	CO	44,020	31	OH	11,860	42	DE	3,760	53	AS	0
10	TX	145,420	21	NE	40,050	32	IA	11,390	43	WV	3,600	54	PR	0
11	OR	129,765	22	MN	37,900	33	NV	8,950	44	MS	3,200	55	RI	0

* *Business Activity – Retail Practitioners*



Buprenorphine Distribution

2012-2017 U.S. Average





Buprenorphine Distribution

Retail Pharmacies



State Ranking* - Buprenorphine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	PA	28,632,630	12	NC	12,666,510	23	OK	5,028,870	34	CO	3,449,388	45	DC	948,058
2	NY	26,334,358	13	MD	11,198,506	24	UT	4,798,024	35	MN	3,128,264	46	AK	939,668
3	OH	23,863,496	14	AL	10,798,187	25	MS	4,709,566	36	NM	3,072,006	47	MT	800,302
4	FL	22,418,290	15	VA	9,784,675	26	SC	4,704,158	37	AR	2,479,442	48	IA	678,446
5	CA	20,000,798	16	WA	8,625,526	27	WI	4,644,726	38	VT	2,322,104	49	NE	608,378
6	MA	19,450,268	17	LA	8,192,852	28	AZ	4,471,392	39	NV	1,647,162	50	WY	537,876
7	KY	16,316,338	18	IN	8,149,080	29	OR	4,437,130	40	ID	1,566,592	51	ND	407,022
8	TN	16,195,006	19	GA	7,601,450	30	MO	4,380,400	41	KS	1,246,834	52	SD	200,018
9	TX	13,816,536	20	CT	7,171,048	31	ME	4,172,150	42	HI	1,221,196	53	VI	11,694
10	NJ	13,725,036	21	WV	6,927,694	32	NH	3,722,984	43	PR	1,202,522	54	GU	530
11	MI	13,360,490	22	IL	6,690,938	33	RI	3,512,246	44	DE	1,164,006	55	AS	0

* *Business Activity – Retail Pharmacies*



State Ranking* - Buprenorphine

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	PA	31,897,154	12	NJ	14,400,630	23	OK	5,808,752	34	RI	3,802,198	45	PR	1,198,536
2	NY	28,764,435	13	MD	12,398,238	24	OR	5,359,120	35	CO	3,764,922	46	AK	1,142,032
3	OH	26,158,834	14	AL	12,176,008	25	SC	5,304,810	36	NM	3,551,104	47	MT	1,088,812
4	FL	24,177,806	15	IN	10,318,702	26	UT	5,276,228	37	AR	3,079,406	48	IA	778,188
5	CA	22,395,194	16	VA	10,116,024	27	WI	5,127,856	38	VT	2,728,532	49	NE	679,226
6	MA	21,142,180	17	WA	10,093,418	28	MO	5,088,882	39	ID	1,854,894	50	WY	637,180
7	TN	17,800,288	18	LA	9,763,600	29	MS	5,028,064	40	NV	1,838,896	51	ND	450,332
8	KY	17,661,612	19	GA	8,291,451	30	AZ	5,018,492	41	DE	1,444,186	52	SD	235,578
9	NC	15,506,116	20	IL	7,924,872	31	ME	5,004,694	42	KS	1,356,664	53	VI	7,850
10	MI	14,961,338	21	CT	7,765,608	32	NH	4,219,292	43	HI	1,330,424	54	GU	480
11	TX	14,517,894	22	WV	7,391,406	33	MN	3,855,608	44	DC	1,205,572	55	AS	0

* *Business Activity – Retail Pharmacies*



Buprenorphine Distribution Practitioner's Office



State Ranking* - Buprenorphine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	MD	113,340	12	AZ	13,140	23	VT	2,100	34	DE	60	45	ID	0
2	FL	111,030	13	OH	13,080	24	AK	1,830	35	ME	60	46	KS	0
3	CA	105,420	14	WA	7,380	25	CT	1,770	36	MS	60	47	KY	0
4	TX	87,250	15	WI	6,106	26	NC	750	37	UT	30	48	MT	0
5	PA	57,450	16	CO	5,400	27	WV	684	38	WY	30	49	ND	0
6	RI	54,060	17	MA	4,410	28	MN	540	39	AR	0	50	NE	0
7	MI	52,950	18	AL	3,660	29	VA	484	40	AS	0	51	NH	0
8	NJ	35,400	19	IL	2,940	30	MO	420	41	DC	0	52	NM	0
9	NV	35,340	20	SC	2,640	31	LA	288	42	GU	0	53	PR	0
10	OR	18,660	21	OK	2,370	32	TN	270	43	HI	0	54	SD	0
11	NY	14,220	22	GA	2,190	33	IN	90	44	IA	0	55	VI	0

* *Business Activity – Retail Practitioners*



State Ranking* - Buprenorphine

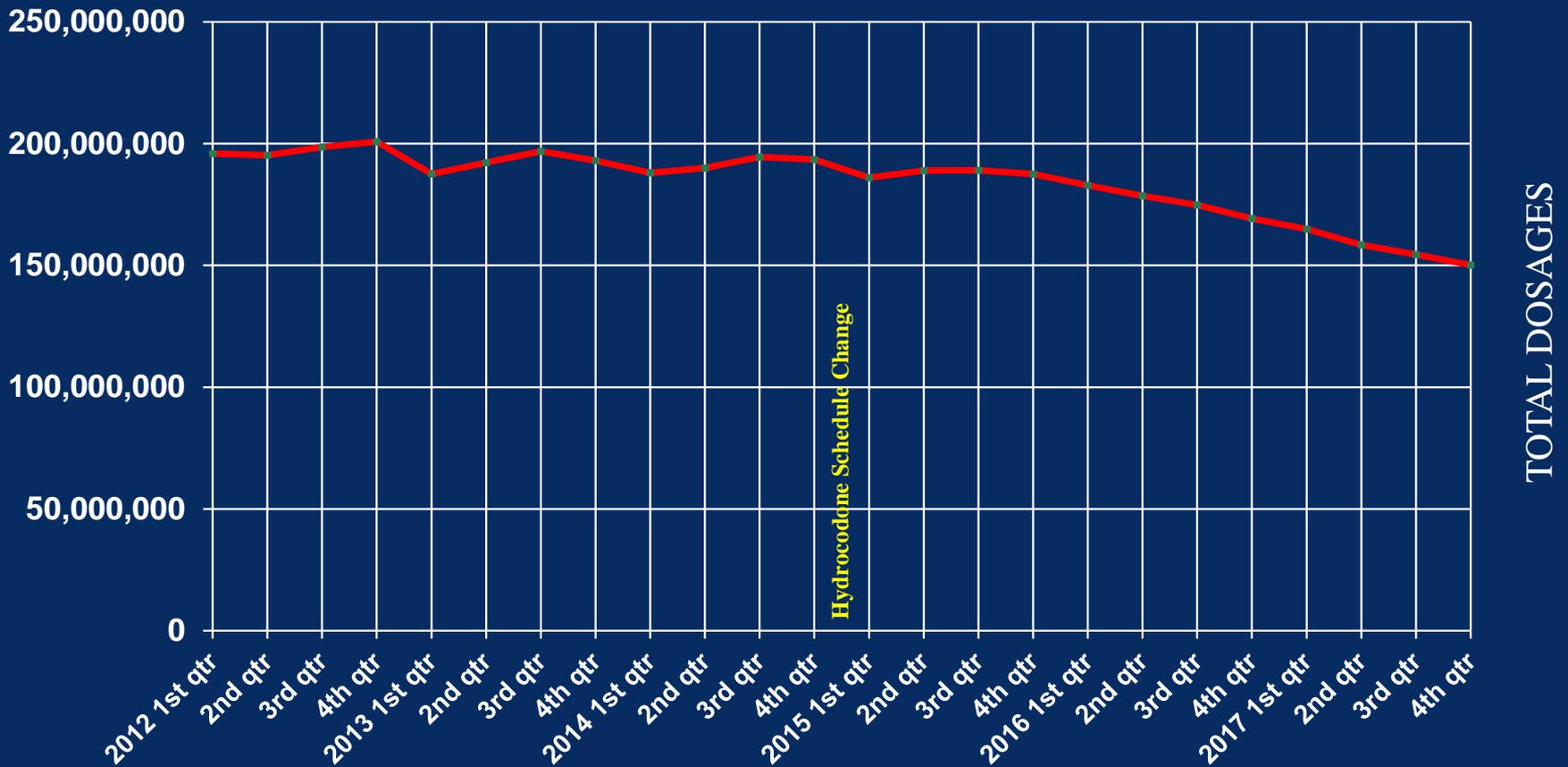
January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	PA	241,624	12	WI	13,576	23	NC	1,650	34	WV	90	45	DC	0
2	MD	110,416	13	WA	13,266	24	IL	1,448	35	CT	83	46	GU	0
3	CA	89,656	14	AZ	6,844	25	IN	1,298	36	MS	64	47	HI	0
4	TX	89,578	15	GA	5,280	26	MN	1,020	37	DE	60	48	IA	0
5	MI	87,680	16	SC	4,620	27	KY	972	38	NM	60	49	ID	0
6	FL	48,800	17	AL	3,398	28	AK	934	39	RI	50	50	MT	0
7	NV	45,750	18	MO	3,150	29	NH	424	40	UT	44	51	NE	0
8	NJ	45,684	19	KS	2,700	30	MA	404	41	ME	34	52	SD	0
9	OR	21,300	20	TN	2,262	31	VA	346	42	PR	4	53	VI	0
10	NY	17,962	21	CO	2,250	32	ND	270	43	AR	0	54	VT	0
11	OH	16,928	22	OK	1,950	33	LA	244	44	AS	0	55	WY	0

* *Business Activity – Retail Practitioners*



Morphine Distribution 2012-2017 U.S. Average





Morphine Distribution

Retail Pharmacies



State Ranking* - Morphine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	68,601,930	12	GA	16,099,780	23	AL	10,727,912	34	CT	5,127,272	45	AK	1,630,378
2	FL	55,582,900	13	OR	14,580,040	24	MA	10,026,080	35	IA	5,064,134	46	RI	1,609,786
3	PA	30,379,134	14	OK	14,366,990	25	NV	9,955,602	36	ID	4,485,694	47	VT	1,570,988
4	TX	28,690,088	15	IL	14,129,610	26	SC	9,463,078	37	NM	4,481,724	48	SD	1,292,984
5	AZ	27,982,976	16	WI	14,025,740	27	LA	7,891,570	38	WV	3,325,732	49	WY	1,241,460
6	MI	27,562,106	17	IN	13,291,792	28	MN	7,809,498	39	DE	3,232,100	50	ND	918,578
7	TN	24,461,684	18	MO	13,203,956	29	UT	7,582,980	40	ME	3,028,304	51	DC	462,860
8	NY	22,274,440	19	MD	13,091,098	30	AR	7,448,044	41	MT	2,982,682	52	PR	232,070
9	WA	19,818,762	20	VA	11,782,100	31	KY	7,004,708	42	HI	2,866,190	53	GU	101,600
10	NC	19,205,796	21	NJ	11,588,070	32	KS	6,221,092	43	NH	2,826,318	54	VI	16,400
11	OH	18,324,462	22	CO	11,062,854	33	MS	5,174,414	44	NE	2,703,984	55	AS	0

* *Business Activity – Retail Pharmacies*



State Ranking* - Morphine

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	CA	60,913,914	12	GA	15,355,060	23	AL	9,511,142	34	CT	4,567,002	45	AK	1,473,762
2	FL	52,506,746	13	IL	13,192,538	24	NV	9,043,506	35	IA	4,521,494	46	RI	1,436,700
3	PA	27,696,706	14	OK	13,168,648	25	SC	9,000,106	36	ID	4,260,124	47	VT	1,366,218
4	TX	27,030,444	15	OR	12,086,298	26	MA	8,973,426	37	NM	3,614,402	48	WY	1,155,140
5	MI	24,389,222	16	MO	12,005,800	27	UT	7,079,132	38	DE	3,138,174	49	SD	1,118,600
6	AZ	24,289,066	17	WI	11,892,570	28	LA	7,064,228	39	WV	2,748,100	50	ND	793,054
7	TN	21,307,364	18	MD	11,696,950	29	MN	7,026,794	40	NH	2,646,192	51	DC	395,986
8	NY	19,588,310	19	IN	11,488,818	30	AR	6,816,812	41	NE	2,614,002	52	PR	144,200
9	NC	17,324,028	20	NJ	10,597,684	31	KY	6,319,422	42	ME	2,537,514	53	GU	86,000
10	WA	17,261,578	21	VA	10,505,418	32	KS	5,733,764	43	MT	2,528,222	54	VI	16,800
11	OH	16,478,018	22	CO	9,988,810	33	MS	4,708,468	44	HI	2,510,052	55	AS	0

* *Business Activity – Retail Pharmacies*



Morphine Distribution Practitioner's Office



State Ranking* - Morphine

January – December 2016

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	GA	72,380	12	AZ	18,560	23	TN	4,566	34	NE	900	45	IA	0
2	CA	65,332	13	HI	17,160	24	ID	4,500	35	KY	800	46	LA	0
3	MD	57,180	14	OH	17,060	25	MN	3,180	36	MT	600	47	ME	0
4	OK	51,360	15	SC	16,878	26	WA	2,801	37	OR	400	48	MS	0
5	FL	47,885	16	MO	16,660	27	CO	2,780	38	NJ	200	49	ND	0
6	CT	34,710	17	SD	16,660	28	IL	2,633	39	AK	100	50	NH	0
7	NC	34,520	18	VA	15,450	29	TX	2,000	40	AR	100	51	PR	0
8	AL	29,456	19	WI	11,720	30	WY	1,900	41	DE	1	52	RI	0
9	PA	19,893	20	NY	7,800	31	MI	1,560	42	AS	0	53	VI	0
10	IN	19,360	21	KS	5,520	32	MA	1,033	43	DC	0	54	VT	0
11	NV	18,930	22	NM	4,800	33	UT	1,000	44	GU	0	55	WV	0

* *Business Activity – Retail Practitioners*



State Ranking* - Morphine

January – December 2017

RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL	RANK	STATE	TOTAL
1	MD	56,180	12	NY	5,900	23	TX	1,300	34	MT	400	45	LA	0
2	GA	38,943	13	MI	5,406	24	TN	1,233	35	MN	320	46	ME	0
3	OK	35,204	14	CO	4,433	25	OH	1,133	36	IA	300	47	MS	0
4	AL	26,117	15	ID	3,333	26	AR	1,000	37	WY	300	48	NH	0
5	NV	21,513	16	AZ	2,638	27	SC	900	38	OR	200	49	ND	0
6	HI	19,710	17	UT	2,551	28	KY	700	39	DE	120	50	PR	0
7	CT	19,280	18	WA	2,520	29	MA	700	40	NE	100	51	RI	0
8	FL	14,345	19	PA	1,900	30	IL	500	41	NM	100	52	SD	0
9	CA	11,093	20	KS	1,733	31	IN	500	42	AS	0	53	VT	0
10	WI	8,970	21	MO	1,333	32	NJ	500	43	DC	0	54	VI	0
11	VA	8,286	22	NC	1,333	33	AK	450	44	GU	0	55	WV	0

* *Business Activity – Retail Practitioners*



Drug Trends



Heroin and Fentanyl



Heroin

- **Heroin comes from the poppy flower.**
- **It comes from outside of the U.S. – Asia, Pakistan, Afghanistan.**
- **Brought in through different drug routes – Mexico.**
- **Heroin use has increased in the last 5 years.**



Fentanyl

- § Fentanyl is a synthetic opioid.
- § Fentanyl is very powerful (50-100 times more potent than heroin).
- § Dealers are combining Fentanyl with Heroin, pills, marijuana, counterfeit pills, etc.
- § Carfentanil (100 times more potent than Fentanyl).
- § Is stolen or diverted from legitimate channels.



Fentanyl Dangers to Practitioners

- § **Be cautious when inventorying personal items in ED or the hospital.**
- § **Be cautious when touching patients.**
- § **Be cautious when going through a patient's personal items.**
- § **Don't **ever** take back a patient's medications.**



From Pills to Heroin





From Pills to Heroin

§ 75% of heroin users switched after first using controlled substance prescription pain relievers.

§ Heroin is much cheaper than prescription drugs.

§ Deck: 1 small bag of heroin (\$8 to \$10)

§ Bundle: 10 bags of heroin



Prescription Drug Abuse Trends



Prescription Drug Abuse

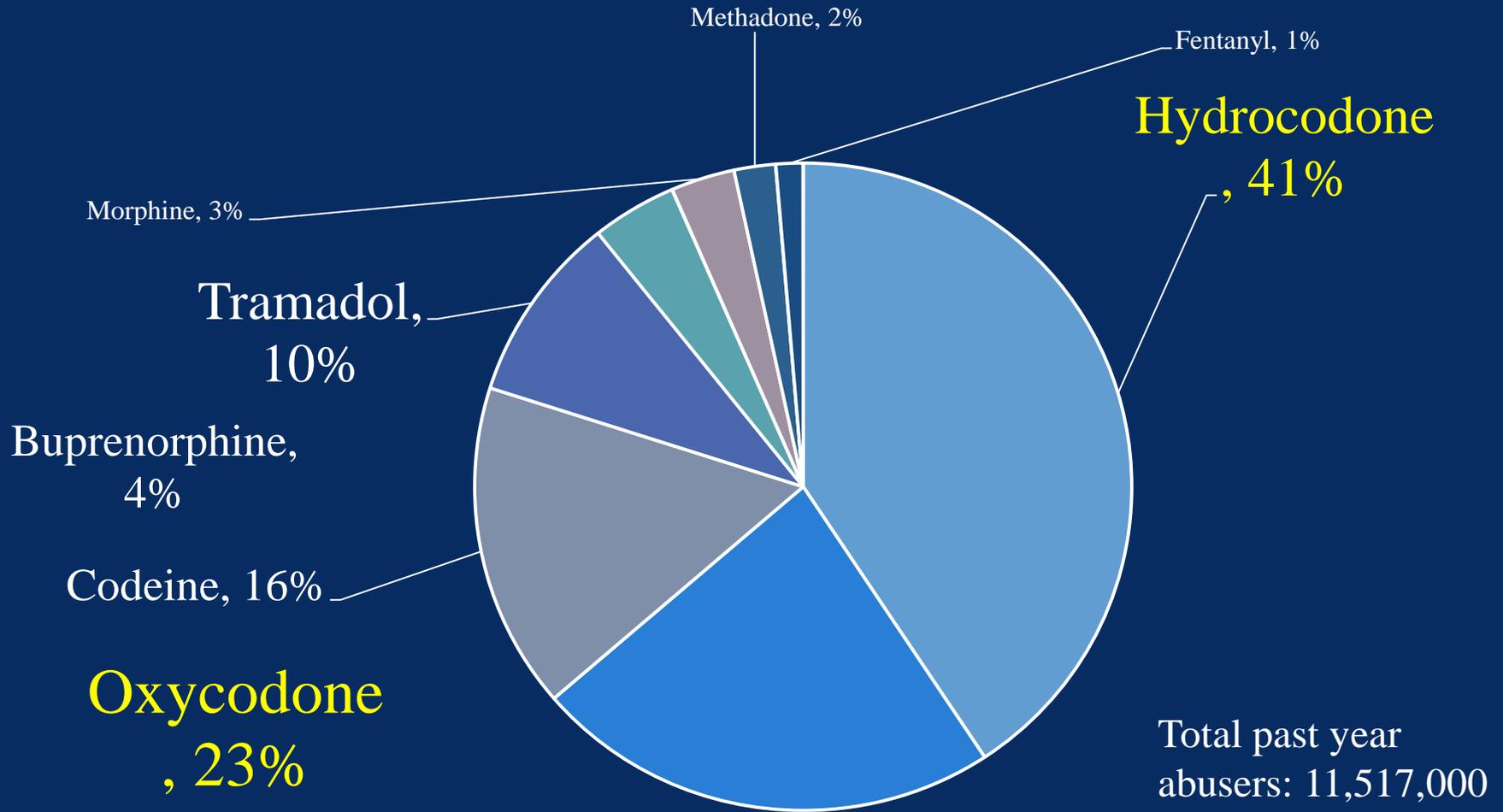
Is Driven By-

**Indiscriminate Prescribing And
Criminal Activity**



Prescription Pain Reliever Misuse

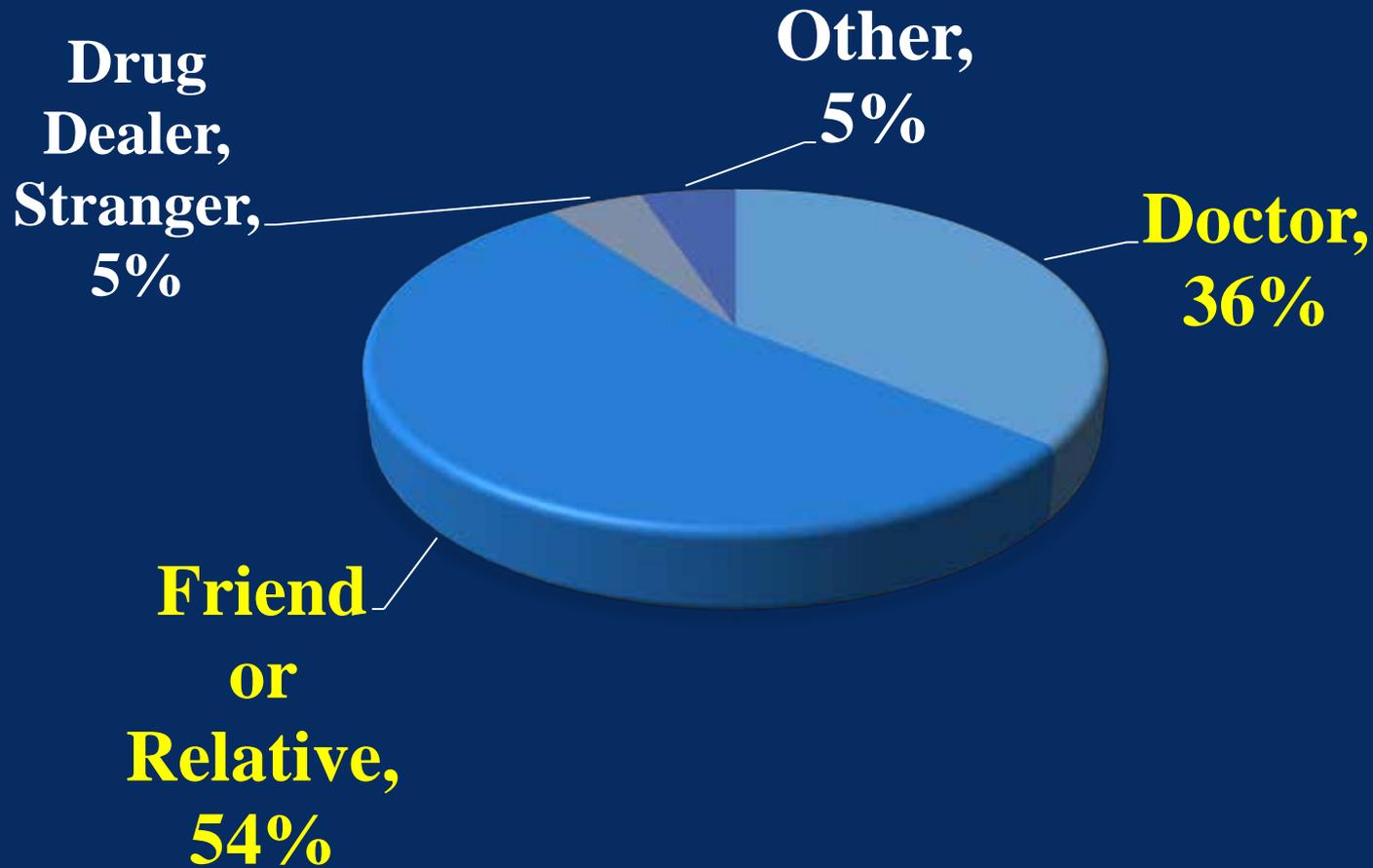
(Age 12 and Older)(2016)



Source: National Survey On Drug Use and Health (2016)



Where Do They Come From?



Source: Department of Health and Human Services



Many Patients Share Prescribed Controlled Substances

University of Pennsylvania Dental School Study:

- § ***More than half of the narcotics prescribed for wisdom teeth removal go unused...findings suggest that more than 100 million pills prescribed go unused... leaving the door open for possible misuse or abuse.**



Many Patients Share Prescribed Controlled Substances

John Hopkins Study:

- § **+60%** had leftover opioids they hung on for “future use”
- § **20%** shared their medications
- § **8%** likely will share w/ friend
- § **14%** likely will share w/ relative
- § **>10%** securely lock their medication

Source: <https://www.pennmedicine.org/news/news-releases/2016/september/100-million-prescription-opioid>
https://www.nlm.nih.gov/medlineplus/news/fullstory_159336.html



Many Patients Share Prescribed Controlled Substances

John Hopkins Study:

- § The study further explored adult attitudes towards controlled substances and found:
- § 73 percent of adults agreed that children can overdose on opioids more easily than adults.

Source: <https://www.pennmedicine.org/news/news-releases/2016/september/100-million-prescription-opioid>
https://www.nlm.nih.gov/medlineplus/news/fullstory_159336.html



Many Patients Share Prescribed Controlled Substances

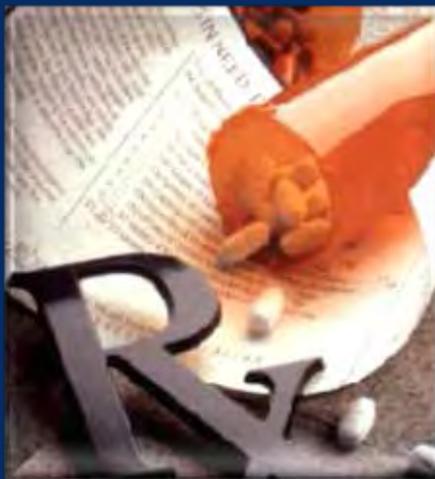
John Hopkins Study:

- § Yet found that 13% of the respondents “worry” about their children accessing their opioid medications.
- § With parents of older children reporting that they were **significantly less** likely to worry about children accessing medications than parents of younger children.

Source: <https://www.pennmedicine.org/news/news-releases/2016/september/100-million-prescription-opioid>
https://www.nlm.nih.gov/medlineplus/news/fullstory_159336.html



Violence





Violence Associated With Opiates

Communities undergo:

- § **Drug related crimes**
 - a. **Robberies**
 - b. **Burglaries/break ins**
 - c. **Drug thefts**

- § **Abuse and neglect of children**

- § **Domestic violence in the home**

- § **Increase of arrests**

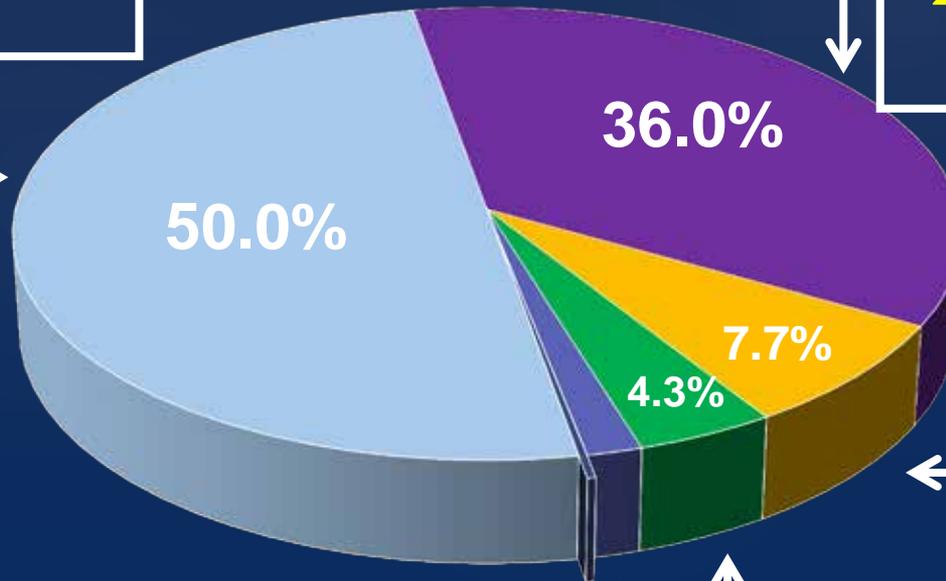


Nationwide Practitioner Thefts

January 1, 2009 – December 31, 2017

Other
3,973 Incidents
Reported

**Employee
Pilferage
2,860 Incidents
Reported**



Night Break-In
615 Incidents
Reported

Armed Robbery
21 Incidents Reported -
0.3%

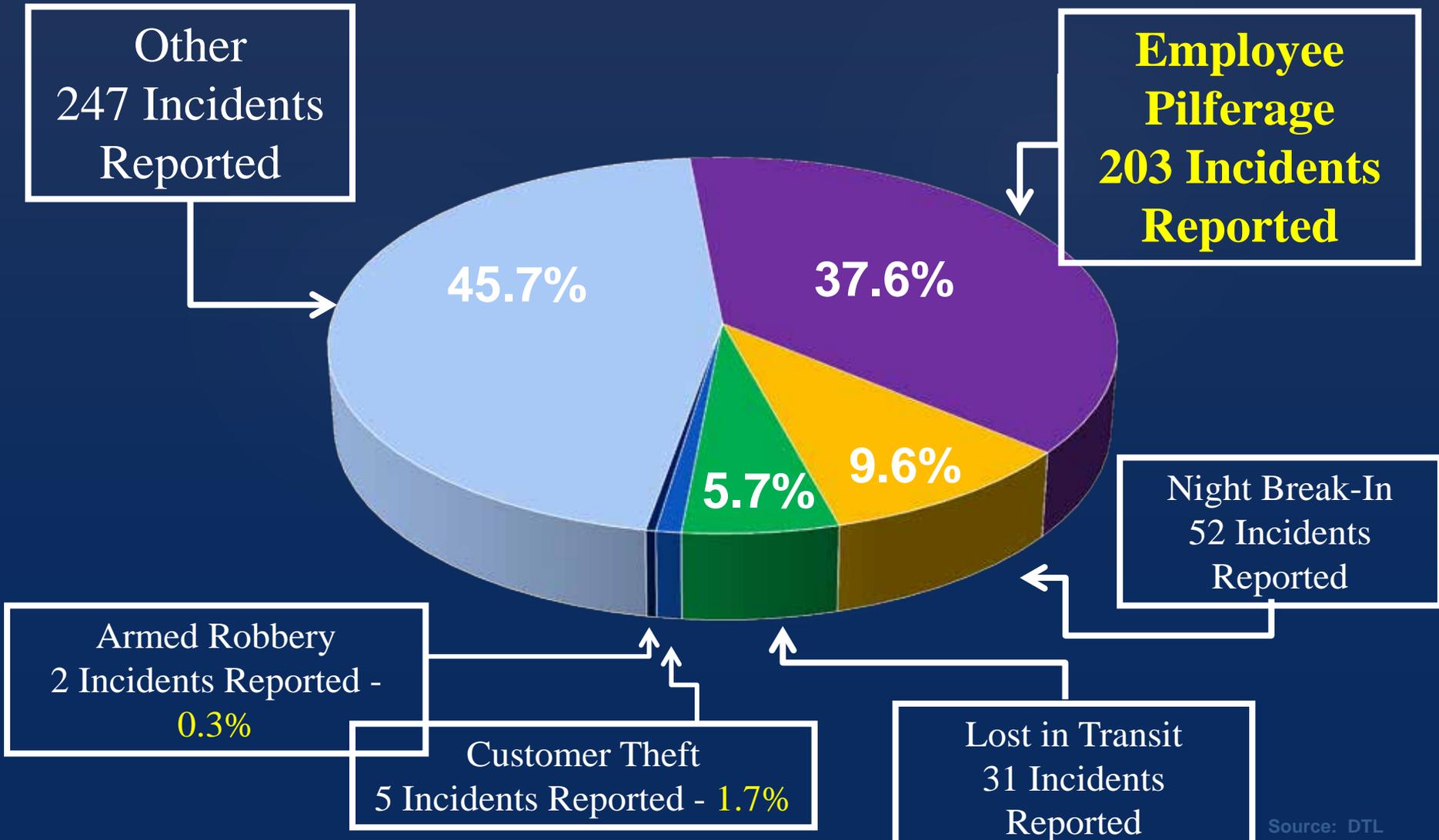
Customer Theft
136 Incidents Reported -
1.7%

Lost in Transit
341 Incidents
Reported



Florida Practitioner Thefts

January 1, 2009 – December 31, 2017





CDC Guidelines

Prescribing Opioids for Chronic Pain

Clinical Reminders:

- § **Opioids are not first-line or routine therapy for chronic pain.**
- § **Establish and measure goals for pain and function.**
- § **Discuss benefits, risks and availability of non opioid therapies with patients.**



CDC Guidelines

Prescribing Opioids for Chronic Pain

Clinical Reminders:

- § **Use immediate-release opioids when starting.**
- § **Start low and go slow.**
- § **When opioids are needed for acute pain, prescribe no more than needed.**



CDC Guidelines

Prescribing Opioids for Chronic Pain

Clinical Reminders:

- § **Do not prescribe ER/LA opioids for acute pain.**
- § **Follow-up and re-evaluate risk of harm; reduce dose or taper and discontinue if needed.**
- § **Evaluate risk factors for opioid-related harms.**



CDC Guidelines

Prescribing Opioids for Chronic Pain

Clinical Reminders:

- § **Check PDMP for higher dosages and prescriptions from other providers.**
- § **Use urine drug testing to identify prescribed substances and undisclosed use.**
- § **Avoid concurrent benzodiazepine and opioid prescribing.**
- § **Arrange treatment for opioid use disorder if needed.**



Survey of Long-Term Painkiller Users

- § Majority say their doctor talked about possibility of addiction or dependence – **61% say there was no discussion about plan to get them off.**

- § Majority say they used the drugs to relieve pain. Other major reasons for taking them:
 - § **20%** - “for fun or get high”
 - § **14%** - “to deal with day-to-day stress”
 - § **10%** - “to relax or relieve tension”



Survey of Long-Term Painkiller Users

§ Other Findings:

- § **34% admit being dependent or addicted.**
- § **17% have taken painkillers that were not specifically prescribed for them.**
- § **14% have given their painkillers to a family member or friend.**
- § **20% know or suspect someone was using, taking or selling their painkillers.**



Post Questions

- 1. Which country, per million population, has the largest amount of drug induced deaths ages 15-64?**
 - A. Sweden**
 - B. Germany**
 - C. United States**
 - D. Russia**
 - E. China**



Post Questions

2. Which state, via prescriptions, dispensed the most oxycodone in the United States in 2016 and 2017?

A. California

B. Florida

C. Texas

D. Ohio

E. New York



Post Questions

3. What percentage of the world's hydrocodone production does the United States consume?

- A. Less than 10%**
- B. 34%**
- C. 50%**
- D. More than 70%**



Post Questions

4. What is the most misused prescription controlled substance pain reliever in the United States?

- A. Oxycodone**
- B. Morphine**
- C. Hydrocodone**
- D. Codeine**



Post Questions

- 5. What percent of heroin users began their addictions with prescribed pain relievers?**
- A. 15%**
 - B. 40%**
 - C. 75%**
 - D. 90%**
 - E. 99%**



*Thank-you for your time
and attention !*

